

WHAT IS CLAIMED IS:

Ans 93

1. A light emitting device comprising:
a first insulating layer comprising silicon nitride or silicon oxynitride;
5 a second insulating layer comprising silicon oxynitride over said first insulating layer;
a thin film transistor formed between said first insulating layer and said second insulating layer, said thin film transistor having a semiconductor layer comprising silicon, a gate insulating film, and a gate electrode;
10 a third insulating layer comprising silicon nitride or silicon oxynitride over said second insulating layer;
a fourth insulating layer comprising carbon over said third insulating layer;
a light emitting element formed between said third insulating layer and said fourth insulating layer, said light emitting element comprising an anode, an organic compound layer,
15 and a cathode comprising an alkali metal; and
partition layers comprising an insulating material on said third insulating layer,
wherein said light emitting element is formed between partition layers.

2. A light emitting device according to claim 1, wherein said fourth insulating layer
20 comprises diamond-like carbon.

Sub B'

3. A light emitting device according to claim 1, wherein an organic resin layer is
provided between said second insulating layer and said third insulating layer.

Ans 94

4. A light emitting device comprising:

a first insulating layer comprising silicon nitride or silicon oxynitride;

a second insulating layer comprising silicon oxynitride over said first insulating layer;

5 a thin film transistor formed between said first insulating layer and said second insulating layer, said thin film transistor having a semiconductor layer comprising silicon, a gate insulating film, and a gate electrode;

a third insulating layer comprising silicon nitride or silicon oxynitride over said second insulating layer;

10 a fourth insulating layer comprising carbon over said third insulating layer;

a light emitting element formed between said third insulating layer and said fourth insulating layer, said light emitting element comprising an anode, an organic compound layer, and a cathode comprising an alkali metal; and

partition layers comprising an insulating material on said third insulating layer,

15 wherein said light emitting element is formed between partition layers, and

wherein said partition layers have a shape in which an upper portion protrudes in a direction parallel to a substrate.

Sub B

20 5. A light emitting device according to claim 4, wherein said fourth insulating layer comprises diamond-like carbon.

6. A light emitting device according to claim 4, wherein an organic resin layer is provided between said second insulating layer and said third insulating layer.

7. A light emitting device comprising:
a first insulating layer comprising silicon nitride or silicon oxynitride;
a second insulating layer comprising silicon oxynitride over said first insulating layer;
5 a thin film transistor formed between said first insulating layer and said second insulating layer, said thin film transistor having a semiconductor layer comprising silicon, a gate insulating film, and a gate electrode;
a third insulating layer comprising silicon nitride or silicon oxynitride over said second insulating layer;
10 a fourth insulating layer comprising carbon over said third insulating layer;
a light emitting element formed between said third insulating layer and said fourth insulating layer, said light emitting element comprising an anode, an organic compound layer, and a cathode comprising an alkali metal; and
partition layers comprising an insulating material on said third insulating layer,
15 wherein said light emitting element is formed between partition layers, and
wherein said organic compound layer and said cathode are provided without contacting said partition layers.

8. A light emitting device according to claim 7, wherein said fourth insulating layer
20 comprises diamond-like carbon.

9. A light emitting device according to claim 7, wherein an organic resin layer is provided between said second insulating layer and said third insulating layer.

Jan 96

10. A light emitting device comprising:
a first insulating layer comprising silicon nitride or silicon oxynitride;
a second insulating layer comprising silicon oxynitride over said first insulating layer;
5 a thin film transistor formed between said first insulating layer and said second insulating layer, said thin film transistor having a semiconductor layer comprising silicon, a gate insulating film, and a gate electrode;
a third insulating layer comprising silicon nitride or silicon oxynitride over second insulating layer; and
10 a fourth insulating layer comprising carbon over third insulating layer;
a light emitting element formed between said third insulating layer and said fourth insulating layer, said light emitting element comprising an anode, an organic compound layer, and a cathode comprising an alkali metal; and
partition layers comprising an insulating material on said third insulating layer,
15 wherein said light emitting element is formed between partition layers having a shape in which an upper portion protrudes in a direction parallel to a substrate, and
wherein said organic compound layer and said cathode are provided without contacting said partition layers.

20 11. A light emitting device according to claim 10, wherein said fourth insulating layer comprises diamond-like carbon.

Sub
B
12. A light emitting device according to claim 10, wherein an organic resin layer is provided between said second insulating layer and said third insulating layer.

Line 7

13. A light emitting device comprising:
a substrate;
a gate electrode over said substrate;
a first insulating layer comprising silicon nitride or silicon oxynitride over said gate electrode;
a semiconductor film over said first insulating film;
a second insulating layer comprising silicon oxynitride over said semiconductor film;
a third insulating layer comprising silicon nitride or silicon oxynitride over said second insulating film; and
10 a light emitting element over said third insulating layer, said light emitting element having an anode, an organic compound layer, and a cathode comprising an alkali metal;
a fourth insulating layer comprising carbon over said light emitting element; and
partition layers comprising an insulating material over said third insulating layer,
wherein said light emitting element is formed between partition layers.

15

14. A light emitting device according to claim 13, wherein said fourth insulating layer comprises diamond-like carbon.

Sub
b'

15. A light emitting device according to claim 13, wherein an organic resin layer is provided between said second insulating layer and said third insulating layer.

20

16. A light emitting device comprising:

a substrate;

a first insulating layer comprising a material selected from the group consisting of

Line 8

silicon nitride and silicon oxynitride over said substrate;

a plurality of thin film transistors formed on said first insulating layer;

a second insulating layer comprising silicon oxynitride over said plurality of thin film transistors;

5 a third insulating layer comprising a material selected from the group consisting of silicon nitride and silicon oxynitride over said second insulating layer;

a plurality of light emitting elements arranged in a matrix over said substrate wherein said plurality of thin film transistors are operationally connected to said plurality of light emitting elements, each of the light emitting elements comprising an anode, a cathode comprising an alkali metal and an organic compound layer between said anode and said cathode;

10 a plurality of partition layers formed over said third insulating layer and extending in parallel; and

a fourth insulating layer comprising carbon formed over said plurality of light emitting elements wherein each of said light emitting elements is interposed between said third and fourth insulating layers,

15 wherein said light emitting elements arranged in a same row or a same column of said matrix are disposed between and along adjacent ones of said plurality of partition layers.

20 *Sub B* 17. A light emitting device according to claim 16, wherein said fourth insulating layer comprises diamond-like carbon.

18. A light emitting device according to claim 16, wherein an organic resin layer is provided between said second insulating layer and said third insulating layer.

Line 9

19. A light emitting device according to claim 16, wherein said plurality of partition layers are spaced apart from said cathode and said organic compound layer of said light emitting elements.

5 20. A light emitting device comprising:

a substrate;

a first insulating layer comprising a material selected from the group consisting of silicon nitride and silicon oxynitride over said substrate;

10 at least one thin film transistor formed on said first insulating layer;

10 a second insulating layer comprising silicon oxynitride over said thin film transistor;

15 a third insulating layer comprising a material selected from the group consisting of silicon nitride and silicon oxynitride over said second insulating layer;

at least one light emitting element wherein said thin film transistor is operationally connected to said light emitting element, said light emitting element comprising an anode, a

15 cathode comprising an alkali metal and an organic compound layer between said anode and said cathode; and

20 at least first and second partition layers over said third insulating layers wherein said light emitting element is disposed between said first and second partition layers,

a fourth insulating layer comprising carbon formed over said light emitting element

20 wherein the light emitting element is interposed between said third and fourth insulating layers,

wherein a distance between opposed edges of said first and second partition layers at a top portion of said first and second partition layers is smaller than a distance between opposed edges of said first and second partition layers at a bottom portion of said first and

second partition layers.

Smb
B1
5

21. A light emitting device according to claim 20, wherein said fourth insulating layer comprises diamond-like carbon.

Inducto
10

22. A light emitting device according to claim 20, wherein an organic resin layer is provided between said second insulating layer and said third insulating layer.

10

23. A light emitting device according to claim 20, wherein said plurality of partition layers are spaced apart from said cathode and said organic compound layer of said light emitting elements.